

# Specifications — MLC 226 Series

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## IP Intercom

Connection type (IPI-MLC).....	RJ-45 jack for CAT 5, CAT 5e, or CAT 6 cable
Audio	
Frequency response .....	20 Hz to 3.3 kHz, $\pm 1$ dB
Audio processing	
Audio format .....	PCM, $\mu$ -law companded
Sampling rate.....	8 kHz
Sample size.....	16 bit, $\mu$ -law companded to 8 bit
Audio latency.....	Software: 30 ms through 160 ms Network: <150 ms, typical
Audio output	
Number/signal type.....	1 mono (for use with an optional IP Intercom)
Line level output .....	-10 dBV (316 mVrms), unbalanced (via 3.5 mm captive screw connector, 2 pole)
Communication	
Transport bandwidth for IPI control and audio, half duplex	80 kbps (0.08% of 100Base-T)
Ethernet protocol.....	TCP/IP (control), UDP (audio)

## Control — host ports

Serial host port.....	2 bidirectional RS-232: 1 rear panel 9-pin female D connector (shared with digital input), 1 front panel 2.5 mm mini stereo jack
Baud rate and protocol.....	38400, 8 data bits, 1 stop bit, no parity
Serial control pin configurations.	9-pin female D connector: 2 = TX, 3 = RX, 5 = GND Mini stereo jack: tip = TX, ring = RX, sleeve = GND
Ethernet host port .....	1 RJ-45 female
Ethernet data rate (for network communication)	10/100Base-T, half/full duplex with autodetect
Ethernet protocol.....	ARP, DHCP, ICMP (ping), TCP/IP, Telnet, HTTP, SMTP
Ethernet default settings .....	Link speed and duplex level = autodetected IP address = 192.168.254.254 Subnet mask = 255.255.0.0 Default gateway = 0.0.0.0 DHCP = off
Web server .....	Up to 200 simultaneous sessions 7.25 MB nonvolatile user memory
Secondary control panel (SCP)....	(1) 3.5 mm 5-pole direct insertion captive screw connector (shared with control module and IR Link port)
IR remote control.....	IR 402 (optional) Front panel: 30' maximum, 40 degrees off axis Rear panel: 38 kHz, hardwired, modulated
Program control.....	Extron's configuration program for Windows® Extron's Simple Instruction Set (SIS™) Microsoft® Internet Explorer, Telnet
IR learning frequencies.....	30 kHz to 62 kHz
IR learning distance .....	2" (5.1 cm) to 12" (30.5 cm) from the front panel

## Control — relay

Number/type .....	6 momentary or latching (configurable via software)
Connectors .....	(3) 3.5 mm captive screw connectors, 3 pole
Connector configuration .....	Groups A, B, C; each with 1 common and 2 normally open relays (default)
Contact rating .....	24 V, 1 A

## Specifications — MLC 226 Series, cont'd

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### Control — serial ports

Display control port.....	(1) 3.5 mm direct insertion captive screw connector, 3 pole, programmable for bidirectional RS-232 control ( $\pm 5$ V) or TTL level (0 to 5 V) infrared control up to 1 MHz
Switcher control port.....	(1) 3.5 mm direct insertion captive screw connector, 3 pole, for bidirectional RS-232 control ( $\pm 5$ V)
Baud rate and protocol (RS-232) ..	115200 to 300 baud (9600 baud = default); 8 (default) or 7 data bits; 1(default) or 2 stop bits; no parity (default), or even or odd parity

### Control— IR/serial ports

IR/serial control ports.....	(3) 3.5 mm direct insertion captive screw connectors, 2 pole Programmable: unidirectional RS-232 ( $\pm 5$ V) control, or TTL level (0 to 5 V) infrared control up to 1 MHz
Baud rate and protocol.....	115200 to 300 baud (9600 baud = default) ; 8 (default) or 7 data bits; 1(default) or 2 stop bits; no parity (default), or even or odd parity

### Digital I/O control

Number/type .....	1 digital input/output (configurable), 1 digital input
Connector .....	1 rear panel 9-pin female D connector (shared with the serial host port) (1) 3.5 mm direct insertion captive screw connector (shared with power sense port)
Pin configuration.....	9-pin female D connector: 1 = digital input, 5 = GND; power sense = digital in, GND = GND
Digital inputs	
Input voltage range.....	0-12 VDC
Input impedance .....	28k ohms
Programmable pullup .....	2k ohms to +5 VDC
Threshold low to high .....	>2.8 VDC
Threshold high to low .....	<2.0VDC
Digital output .....	250 mA sink from 24 VDC, maximum

### General

External power supply .....	100 VAC to 240 VAC, 50/60 Hz, external; to 12 VDC, 1 A, regulated
Power input requirements	
MLC 226 IP DV+ .....	12 VDC, 0.515 A (includes MLC 226 IP and IRCM-DV+)
All other models.....	12 VDC, 0.495 A (0.515 A with 1 IRCM-DV+ connected)

**NOTE** *An MLC 226 Series controller must be powered by its own power supply. It cannot be powered by an MLS switcher.*

Temperature/humidity.....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling .....	Convection, unvented
Rack mount	
MLC 226 IP DV+ .....	No, but wall- and furniture-mountable
All other models.....	Yes, with optional rack mounting kits, and also wall- and furniture-mountable with optional mounting kits
Enclosure type	
MLC 226 IP controller only	No faceplate, metal rear enclosure
MLC 226 IP, MLC 226 IP DV+	High-impact plastic faceplate, metal rear enclosure
MLC 226 IP with RAL9010	white faceplate, MLC 226 IP AAP, MLC 226 IP L Metal faceplate, metal rear enclosure

#### Enclosure dimensions

MLC 226 faceplate..... 4.5" H x 6.4" W x 0.1" D (11.4 cm H x 16.3 cm W x 0.3 cm D) (3 gang)

MLC 226 AAP, MLC 226 IP DV+ faceplates

4.5" H x 10.0" W x 0.1" D (11.4 cm H x 25.4 cm W x 0.3 cm D) (5 gang)

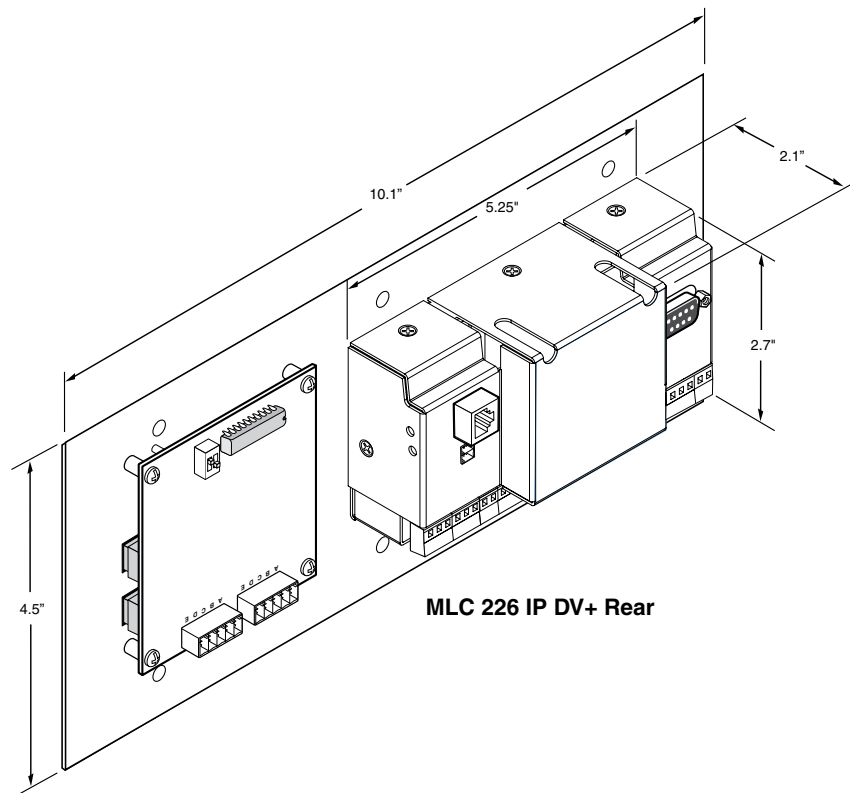
MLC 226 L faceplate ..... 3.15" H x 6.5" W x 0.1" D (8.0 cm H x 16.5 cm W x 0.3 cm D)

#### Device

MLC 226 IP DV+ ..... 2.75" H x 5.3" W x 2.0" D (7.0 cm H x 13.5 cm W x 5.9 cm D) and

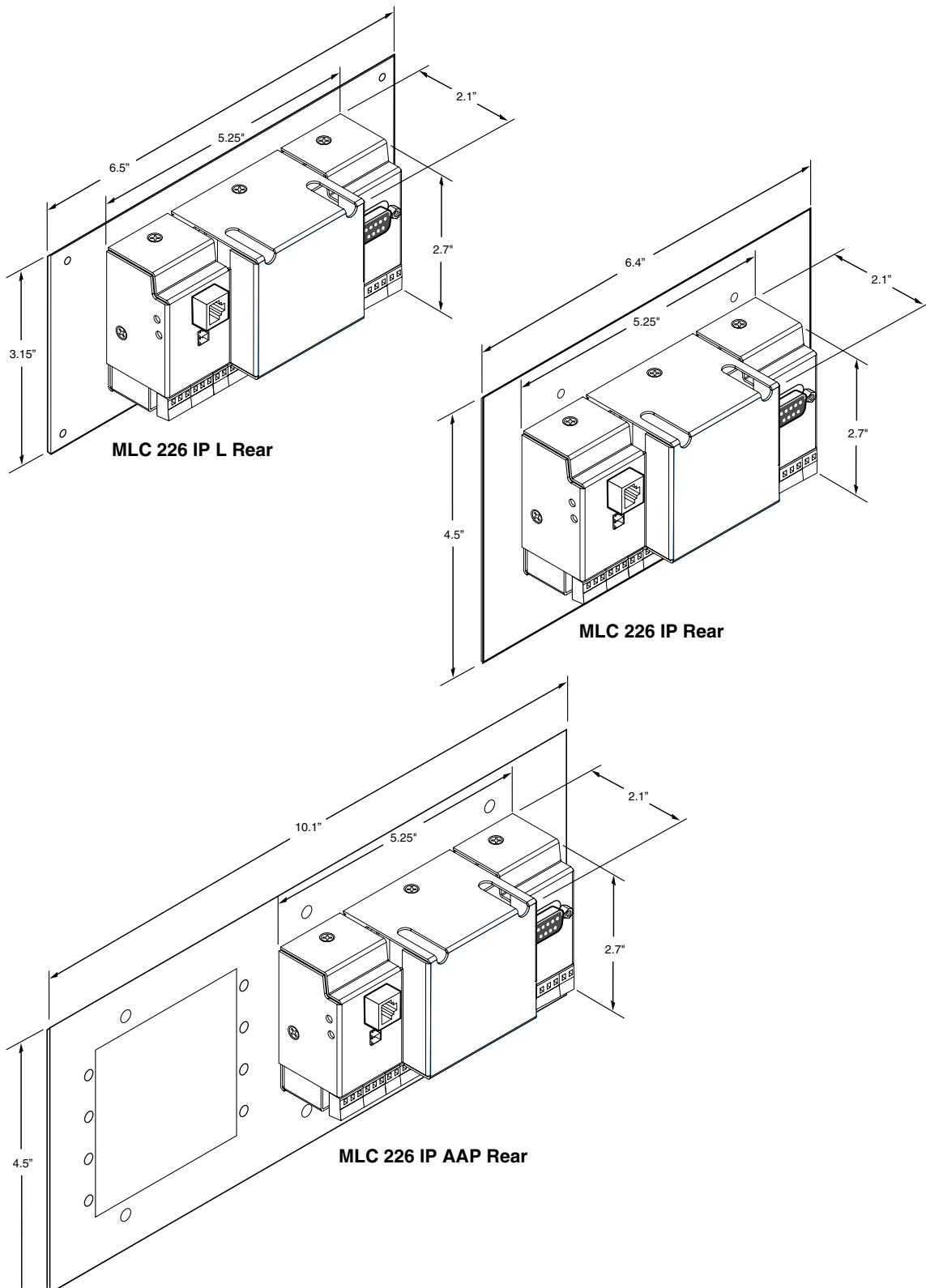
2.7" H x 2.6" W x 0.9" D (6.9 cm H x 6.6 cm W x 2.3 cm D)

(Depth excludes knob and buttons. Fits some 5 gang boxes. Allow at least 2.1" (5.3 cm) depth in the wall or furniture.)



# Specifications — MLC 226 Series, cont'd

All other models..... 2.75" H x 5.3" W x 2.0" D (7.0 cm H x 13.5 cm W x 5.9 cm D)  
(Depth excludes knob and buttons. Fits some 3 gang boxes)



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Product weight	
MLC 226 IP DV+ .....	2.1 lbs (1.0 kg)
All other models.....	1.9 lbs (0.9 kg)
Shipping weight .....	6 lbs (3 kg)
Vibration .....	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety .....	CE, C-tick, CUL, UL
EMI/EMC .....	CE, C-tick, FCC Class A, VCCI, ICES
Accessibility .....	Complies with the appropriate requirements of Section 508 of the Rehabilitation Act (29U.S.C.794d).
MTBF.....	30,000 hours
Warranty .....	3 years parts and labor

**NOTE** *All nominal levels are at  $\pm 10\%$ .*

**NOTE** *Specifications are subject to change without notice.*

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